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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/491,110	01/25/2000	Frank W. Liebenow	450.129US2	8106

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EXAMINER

ALPHONSE, FRITZ

ART UNIT PAPER NUMBER

2675

DATE MAILED: 01/29/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.  
09/491,110

Applicant(s)  
Liebenow

Examiner  
Fritz Alphonse

Art Unit  
2675



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on Jan 25, 2000
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 30-51 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 30-51 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some\* c) ☐ None of:

- ☐ Certified copies of the priority documents have been received.
- ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
- ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\*See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 3
- 18) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other:

Art Unit: 2675

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 30 is rejected under 35 U.S.C. 102(b) as being anticipated by Joyce (U.S. Pat. No. 4,686,329).

As to claim 30, Joyce (figs. 1-3) show a computerized system comprising: a computer (48) having at least a processor (40) and a memory (42); and, a mouse pointing device (10) positionable over a surface (col. 2, lines 64-66) having a plurality of uniquely coded positions arranged in a gradient (col. 1, lines 57-66; col. 5, lines 34-). Joyce discloses an absolute position mouse that senses the coding of the uniquely coded position (i.e., unique pattern of lines) underneath the mouse and conveying to the computer information relative to the uniquely coded position underneath the mouse (col. 4, lines 27-35).

3. Claim 31 is rejected under 35 U.S.C. 102(b) as being anticipated by Kirsch (U.S. Pat. No. 4,546,347).

As to claim 31, kirsch (fig. 1) discloses a mouse pointing device (11) comprising a mechanism movable over a surface (fig. 2; col. 2, lines 5-11), the surface having a plurality of uniquely coded positions arranged in a gradient (i.e., the grid pattern shown in figure 2 provides changes in colors

Art Unit: 2675

and contrast which form a gradient), the mechanism adapted to detect the uniquely coded position underneath the mechanism and to transmit information relative to the uniquely coded position (col. 3, lines 63 through col. 4, line 4).

4. Claims 40, 41, 43 and 51 are rejected under 35 U.S.C. 102(b) as being anticipated by Kirsch (U.S. Pat. No. 4,390,347).

As to claim 40, kirsch (figs. 1, 6) show a pointing device comprising: a housing (14); a first sensor (93) disposed within the housing and positionable over a first gradient having a plurality of positions uniquely varying in intensity level (col. 3, lines 48-62), the first sensor detecting the intensity level of the position underneath the first sensor; and, a second sensor (94) disposed within the housing and positionable over a second gradient having a plurality of positions uniquely varying in intensity level (col.5, lines 62 through col. 6, line 9), the second sensor detecting the intensity level of the position underneath the second sensor, whereby the intensity level detected by the first sensor and the intensity level detected by the second sensor relates to a unique position of the device and information relative to such position is communicated (col. 4, lines 21-62).

As to claims 41, 43 and 51, the claims have substantially the limitations of claim 40. Therefore, they are analyzed as previously discussed in claim 40 above.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2675

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 32-33 and 36-37 and 39, are rejected under 35 U.S.C. 103(a) as being unpatentable over Pettypiece (U.S. Pat. No: 5,223,709) in view of Mak (5,420,943).

As to claim 32, Pettypiece discloses a joystick pointing device comprising: a movable control stick (fig. 2); a first gradient ( gray scales :50), operatively coupled to the control stick (col.2, lines 14-54) such that movement of the control stick on a first axis causes corresponding movement of the first gradient (col.2, lines 55-68; col.3, lines 1-9); a fixed first sensor positioned over the first gradient to detect the intensity level of the position underneath the first sensor (60); a second gradient (gray scale: 52) operatively coupled to the control stick such that movement of the control stick on a second axis causes corresponding movement of the second gradient; and, a fixed second sensor(70) positioned over the second gradient to detect the intensity level of the position underneath the second sensor (col.3, lines 34-65).

Pettypiece does not explicitly disclose a first and second gradient having a plurality of positions uniquely varying in intensity level.

However, Mak discloses a mouse pad having a bar code system that comprises a plurality of positions uniquely varying in intensity level (col.3, lines 62-68).

Therefore, it would have been obvious to one having ordinary skill in the art at time the

Art Unit: 2675

invention was made to use the teaching of Mak related to a uniquely coded position off-screen medium, because it would provide Pettypiece's system with the enhanced capability of providing a universal input device for the computer with a great deal of freedom.

As to claim 33, Pettypiece discloses a joystick pointing device comprising: a first and second light source positioned over the gradients to illuminate the position underneath the sensors (col.3, lines 34-55).

As to claim 36, the claim has substantially the limitations of claims 32-33. Therefore, it is analyzed as previously discussed in claims 32-33 above.

As to claim 37, Mak discloses the use of light source to illuminate the position underneath the first sensor and position underneath the second sensor (col. 3, lines 34-55).

As to claim 39, the claim has substantially the limitations of claim 32. Therefore, it is analyzed as previously discussed in claim 32 above.

6. Claims 34-35 are rejected under 35 U.S.C.103(a) as being unpatentable over Pettypiece.

In regard to independent claim 34, Pettypiece discloses a joystick pointing device comprising: a movable control stick (32); a spherical member (20) mounted to an end of the movable control stick (figs.2 and 3), a bottom surface of the dome having a gradient (gray scale: 50) having a plurality of positions uniquely varying in intensity level (from white to black), (col.2, lines 55-68; col.3, lines 1-9) of a first color on a first axis and a second color on a second axis; a first sensor (60) positioned over the surface of the dome to detect the intensity level of the first color of the position

Art Unit: 2675

above the first sensor; and, a second sensor (70) positioned over the surface of the dome to detect the intensity level of the second color of the position above the second sensor (col.3, lines 10-68).

Pettypiece does not disclose a convex dome mounted to an end of the movable control stick. However, the use of a convex dome is obvious because, first of all it is a matter of design choice. Second, Pettypiece's spherical member has much more surface area to expand the gray scale pattern.

As to claim 35, Pettypiece discloses the use of light source to illuminate the position above the first and the second sensor (col. 3, lines 34-55).

7. Claim 38 is rejected under 35 U.S.C. 103 (a) as being unpatentable over Mak in view of Pettypiece.

In regard to independent claim 39, Mak discloses substantially the limitations of the claim. Unfortunately, he fails to disclose a computerized system comprising a joystick pointing device.

However, Pettypiece discloses a joystick pointing device having a movable control stick. Therefore, it would have been obvious to one having ordinary skill in the art at time the invention was made to use the teaching of Pettypiece related to the use of a joystick pointing device because it would provide Mak's system with the enhanced capability of creating a better ergonomic way to control a pointing device on a display screen.

8. Claims 42, 44-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kirsch (U.S. Pat. No. 4,390, 873) hereinafter referred to (K-873) in view of Kirsch (U.S. Pat. No. 4,546,347) hereinafter referred to (K-347) .

Art Unit: 2675

As to claim 42, Kirsch (K-873) fails to disclose a pointing device, wherein each of the first and second light sources comprises a light-emitting diode. However, this limitation is disclosed by Kirsch (K-347). See column 3, line 12.

Therefore, it would have been obvious to one having ordinary skill in the art at time the invention was made to improve upon the LED as disclosed in K-347. Doing so would improve the detection process with the enhanced capability to emit individual visible light underneath each sensors.

As to claims 44-45, Kirsch (K-873) does not teach a first gradient interposed a second gradient and wherein the position underneath the first sensor is substantially coincident to the position underneath the second sensor. However, these limitations are clearly disclosed by Kirsch (K-347). See figure 2 and the motivation above.

As to claims 46-48, Kirsch (K-873) does not teach each gradient is a color gradient such that the plurality of positions uniquely vary in intensity level of color and wherein the first gradient is a color gradient of a first color and the second gradient is a color gradient of a second color. However, these limitations are clearly disclosed by Kirsch (K-347). See column 3, lines 35-40.

As to claim 49, Kirsch (fig. 2) shows a pointing device, wherein each gradient is a gray-scale gradient such that the plurality of positions uniquely vary in shades of gray.

9. Claim 50 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kirsch (K-873) in view of Pettypiece.

As to claim 50, Kirsch does not disclose a joystick.



Art Unit: 2675

However, using a joystick as a position pointing device is very well known in the art as evidenced by Pettypiece (fig.3). Therefore, it would have been obvious to one having ordinary skill in the art at time the invention was made to use the teaching of Pettypiece related to the use of a joystick pointing device because it would provide Kirsch's system with the enhanced capability of creating a better ergonomic way to control a pointing device on a display screen.

***Conclusion***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Lyon (U.S. Pat. No. 4,521,772) discloses a cursor control device.

Bilbrey et al. (U.S. Pat. No. 4,543,571) discloses an opto-mechanical cursor positioning device.

Joyce (U.S. Pat. No. 4,686,329) discloses an absolute position mouse.

Kwang-Chien (U.S. Pat. No. 4,880,967) discloses an optical input device based on a coordinate vector method.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fritz Alphonse whose telephone number is (703) 308-8534.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Saras, can be reached at (703) 305-9720.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Art Unit: 2675

Washington, D.C. 20231

**or faxed to:**

**(703) 872-9314 ( for Technology Center 2600 only )**

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington.  
VA., Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding  
should be directed to the Technology Center 2600 Customer Service Office whose telephone number  
is (703) 306-0377.



F. Alphonse

Art Unit: 2675

January 25, 2002

  
**CHANH NGUYEN**  
**PRIMARY EXAMINER**